

**AMENDMENTS TO THE CLAIMS**

The claims in this listing will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Original) A porcine uroplakin II gene promoter having a base sequence of SEQ ID NO: 1:

[SEQ ID NO: 1]

gggctaggagtggaatcagagctggcctatgccacagcaacgcagaatccaaaccacatctccgacctaca  
ccagaccgtcaccataaacacaggatcctaaccactgagcaaggtcagggatcaaacccaaattctcatggatactag  
tcgggttcttaaccgctgagccacagtggcactcctgtttgtttgtcttcgttttgctgcacgatacagaagt  
tcctgggttaaggattgaacccatgccacagcagcaacccgagccacagcagtgacaacacgcctgatcctaactgcta  
gaccaccagggAACGCCCCCTCAACTTCTAGCCTGGAAACCCCTGAGTCAGTACAACCTGACAATNGNTTTTTTTTT  
TTGCCTTCTAGGCCACTCCCGGGCATGTGGAGATTCGCAGGCTANAGGTCTAATCGGAGCTGTAGCCACCGGCCTAC  
ACCAGAGCCATAGCAACGAGGGATCCGAGCCAGTCGCAACCTACACTACAGCTCATGGCAACACCGGATCGTTAAC  
CCACTGAGCAAGGCCAGGGATCGAACCCGCAACCTCATGGTCTAGTCAGATTGTTAACCTGACCATGACAGG  
AACTCCAAACCTGACAATTTCATTCTGCACCTAGTTGTGAGTAATTGAAAAATTCCAAGATGTCAAGGTCAAGGTGAG  
TGGTAATTATGTGTCAACCTGACTAGGCCATGTGGCCGGATGTGGAGTCATTGTTACTCTGGATGTTACTGTGAAG  
GGATGAAATTAAACATTAAATCAGTGGGGGGAAAAAGAAGTTCTCGTCTGGCATCAGAAACAAATCCGACTAGGA  
AACAGCGGTTGAGGTTGATCCCTGGCTCAACTTAGTGAGTCAGGATCTGGCTGCGTGAGCTGTGGTACAGGTGG  
AGATGCACTCGGATCTAGCATGCTGTGGCTGTGGTAGGCCAGCAGCTGAGTCATTGTTAACCCCAAGTCTGGAA  
CTCCATATGCCGTGGGTGGCCGGAAAAAGCAAAAATAAATAAATAAATTAAACCAAGGGGATTTGAGCAA  
GCAGATTACCCATAATATGGGTGGGTCTCATCAAGTTCAAGTCATTGTTAGGCCCTAGTGGAACAAAGACCGAC  
CTCCACCTGGCTGGGTGGCCGGAAAAAGCAAAAATAAATAAATAAATTAAACCAAGGGGATTTGAGCAA  
CTCCCCCATCAGACTTGACTTGCAAGCCTCCGCAATTGCTAGGCAATTCCCTAAATAAATCCGCTATATACAC  
CCTGTTGGTTCTGTTCTCCAGAGAACCCCTGACTAACGCACTGCACTGGCTGGCTGGTAGCTGAGTTCCAG  
CTGGCTGAGCTCACCTCCAAACACTCAGCCTCCTCAAGGCTTCTAGCTGTGCTCTCCCTCCCCACAACAGCTGTT  
CAACTCTCAGGGCGCAATCCCTCTCCCTGAGTTCTACTTCCCAGAGAAAGCAGAGACCTCAGGAGTGTGCTGCC  
TAATTACTCCTCATCCCTCAGCCTGCAAAAGTATAAGCTTCTCTGCACCACTGCCCAATTCTCTCTGCAG  
ACAGGGTCAATTCTCTCTGCAGGAGTGTGCTGCC



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ctaccttcctgccccatctcccttgcataattggaaaaacaattcagaatttgtcccactacccttgctagctctgtgcctggaaagctatttattgcctctgagcctctaatttcatctgcaccaaggattaataaaaaggagaggataagatgaattacttatattaatatttattgaaccagatactgtgctaggcactcttaataattagctgagtgtatgtcatatcctggtagacagatttttttccctttatggttgcacgtcaacatcatggaagttccctggctgggtcgaattggagctgcagggtctgcctatgccacagccatggcaacatcatatacaaaccgcacctgtgacctacaccacagattgcagcaacgctggatccttacccaaggagcaaggccaggaatcaaatgtcatcctcacaaacactatgtccggtttttaaccgctgagccacaccaggaactccatggcgagacagatttatactctgtctacagaagagggaaagtgaagctcagaatggtaggttagtaacttggcaagatcaaaaaattcaaagaagattggggcaagtggtagatcatggcagcattagaaaaaaataaagaagcatccactgtttccaacactgaacaactgagatttcttactctcacagctttccagcttcatatccaaggacagacgctgcccattttccatcagaccaatattgctgaacactgcacccttattttaaagcattttataccctgtcatacctgctagataaaatggaaaggatgaaatctcccattataggtgagaaaaattgaggtcaaagtgactcacaaaagtcatatagcatcactcctcaacaggagacagcagtccccaccagaggtaacatgtccatggcgcctgtggacacatttctaactgactggaaagcagcagaatgggtattgtgaaggggaatcataggtatataacagacttaggtctgatccgagctattctgctgcaaaacaaccatattcaattaaaaaaaaaaaaaaaagaaagaaagaaagaaagaaagggccccatcctggcagttgcactggttagacccctgtagtgcagactcaactcagatctggcgttgctgactgtggctgtgatgtaggctgcagctgtactccggtagacccctgctgggaacccatatgcaacccatatgcgggggtggccctaaaaagaaaaaaaaaaaaagaggaattccctatggctcagcaggttaaggatctgttactgcactgtggctctagttacagccatgtgcaggttaatccctggccaggaacgtctgcattccacaggtgtggccaaaaaaaagaaagaaagaaagggaggtctgttggcacaataggattggcaacatcttaggactactggacacaggtcaatccctggccagcacagtggtaaggagccagttgtgtcaaaaaaagaaaaaaaagttaccatagtttagagtaaatctgttttaggagctattttggggcagaacacagagagatcaggagctcctgagagcagaaacttaccttacatccctcgtagcaggttctagggcatacctggtagttataataatataccatgtggataggggattggaaaggaaagagcagggggagggacttgagttgagttaaaaattgagaatccaaaggggagacagcctagaaagagttagtccaagaaagagatcccaggcattgtggccctgggtccctttccaagccatgaggaaatcctcagaggaacagagtgtggcttaaatgacttcagcgttgcaatgaatctgctggctaaagagttatccttgctcctcgctgtccctccctctcagctccccaaaccctctcggtgtgatggataattagatgcgagagctcagcagatgtgtccagttgccttagcaactaatgtttccatggagacccaaagcacagcctccagagcagccagtgagcagtcggcagggcagggagaagacgcactctcagctccctggaaacacctggggagggccaggagttggggaaagaaggggggatcggagggcttaaggcacaggcccctttatcctttaaaatctggcagagctgtccctccctccctactgtcccactcataattcagatggagttggggcttaggatggacccaacacaacaccctgcaataaaacccaacc

ttttctgcttgggtggctgaaaatggnaaaagaaatctccaagtgcagaatgttaaacancntccgggtggcaatggatctgaagagactaagatccctcagaccccttgcaggattccaccatttagtccttcctctccaaagtctcaatgtgcaaaaatccctttcagttgcagagcaatgataggatcttaaaaggagacaaaaggccaaagggtgcaggaaaaatagaattcatgttccacccaaaggcaggcgcgtcctggagacagggtgaaacacttggcctgatctccatcagaggatccagagtgtgtgtttgtctggggagggggacacaatatagagcatctggtactcaaagtatgtgcctcccagagtagcatcaatcaatgttacctgaaagctgttagaaatgcagaatttcaggctcacccatcagaccactgaatcagaaactgcacatctaacaagatccctcatgattcatacgacattaaattggagaagcgcgtaccccttgcctccatggggccataggatcttccatccttattgtcacctcgctcacccatcgtctccatccccaggcttgcgttgccttccatggggaaaggacacaaggccaccagccctcacttccctaccaggaccctggccctcctggactggagaaggacaaagaggaccctctgtggaggctacgcacctcctgaccaagttagtccactcaccacaatggctgtgagggtggagcaggccaaagcctctgtgccatcagaaattgtgtcttttcatttcccttgcgttgcatttttttttttgcgttgcgttgcatttttagggccgtgcctgtggcatcggaaagtcccagggttaggggtccaatggagctgttagcccccggctacgccacagccacagcaatgtggatctgagccacgtctgcaacctacaccacagctacggcaacaccagatcccttaaccactgagcaaggccaggatcgagccacgtcctcatggatgcttagtgggttcgttaaccgctgagccatgatgataactcctttctattcttagtcacaaacagtcaacaaagggtgtgaccaaggctgatcgtgcccaccccccagactggccagtgcccacccctgggtctctggaaatcctgcccagcatcaattggctccactctccaggaggatgggaagccctgtggccctggactcacacccctctgcacccatcccagacttccctccattcctgcccagtcaggcccccctgggttactctcctctgtacaccagtcaacactcagaacctgctccctggaaacacccactaccacgtggagaagggtcgtaggggtggcccccagataactgtaagcaggaacacacgagccctacatgtgggtgtcccggaagaagggggtttccaccccccgttagtcaccctgccccttgccagctgcctgagccaccaaggcccaaggccatggggcagggtgaacagattccctctggccccttccatcccccaggacaaaaccagagccccaggacagggcctactgcctcaggaaaccacagttgccagcaccaggccagcaccagccagct

2. (Original) The uroplakin II promoter of Claim 1, which is one selected from functional equivalents which have one or more disruption, deletion, insertion, point, substitution, nonsense, misense, polymorphism or rearrangement mutation occurred in the base sequence of SEQ ID NO: 1.

3. (Currently Amended) An expression vector comprising the base sequence of the promoter of Claim 1 or 2 and a base sequence coding for a target protein at the 3' end of the promoter.

4. (Original) The expression vector of Claim 3, wherein the target protein is human erythropoietin (EPO).

5. (Original) The expression vector of Claim 4, which is the expression vector pUP2/hEPO deposited under the accession number KCTC 10352BP.

6. (Original) The expression vector of Claim 4, which is an I/pUP2/hEPO vector containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and an insulator of SEQ ID NO: 6 at the 5' end of the UPII promoter:

[SEQ ID NO: 5]

P27726.A01

ccaaacctgcccatacgagattcgattccaccggccgccttatgaaagggtggcttgcgaatcgttccggacgccc  
gctggatgatcctccagcgcgggatctcatgctggagtttcgcgcaccctaggggaggctaactgaaacacggaa  
ggagacaataccggaaggaaccgcgctatgacggcaataaaaagacagaataaaacgcacggtgtggtcgttgt  
tcataaacgcggggttcggtcccaggctggcactctgtcgatccccaccgagaccccattggggcaatacgcccgc  
gttcttccttccccaccccaaaaaacttcgggtgaaggcccaggctgcagccaacgtcgggcccggcaggccc  
tgccatagcctcaggtaactcatataacttagattgataaaactcatttaattaaaaggatcttagtgaagatcctttg  
ataatctcatgacccaaatccctaacgtgagttcgcactgagcgtccgatcg

[SEQ ID NO: 6]

tcgactctagagggacagcccccccccaaagcccccaggatgtaattacgtccctccccgcctaggcag  
cagcgcggcccccgggctccgcgtccggcgtccccccgcatccccgagccggcagcgtgcgggacagcc  
cgggcacgggaaagggtggcacggatcgcttcctctgaaacgcttcgcgtcttgcagcgcagacacctgggggg  
atacgggaaaaagcttaggctgaaagagagattagaatgacagaatcatagaacggctgggtgcaaaaggagca  
cagtgcctcatccagatccaacccctgtatgtcagggcatcaaccgcagcccaggctgcagagccacatccag  
cctggcctgaatgcctgcagggatgggcatccacagccttggcaacctgttcagtgcgtcaccaccctgggggg  
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gctgtgacattgtggctgggtgacacatgttgcattcagtgcatcggagaggcagatctgggataaggaagt  
gcaggacagcatggacgtggacatgcagggtgtgaggctggacactctccaagtgcgtcagaacagcct  
taaggataagaagataggatagaaggacaaagagcaagttaaaacccagcatggagaggagcacaaggcca  
cagacactgctggccctgtctgagcctgcattgttgcattgtgttgcattgttgcattgttgcattgttgcattgt  
gagagataacagctgggtcagtaggactggacaggcagctggagaattgcattgttgcattgttgcattgttgcattgt  
tgaaggctggaaagcctcaagatccccaaagaccaacccaaacccaccgtgccactggccatgtccctcagtg  
ccacatccccacagttctcatcacccctcaggacggcgtgaccccccacccctccgtggcagctgtgcactgcacccg  
ctcttggagaaggtaatctgtctaaatccagccgaccctccctggcacaacgtaaaggccattatctctcatccaactcc  
aggacggagtcagtgaggatgggcttagaggacagccccccaaagcccccaggatgtaattacgtccctcc  
cccgctagggcagcgcgcggccggctccgcgtccggcgtccccccgcattccgcggcagcc  
gtgcgggacagccggcacgggaaagggtggcagggatcgcttcctctgaaacgcttcgcgtcttgcattgttgcattgt  
gacacctggggatacgggaaaaagcttaggctgaaagagagattagaatgacagaatcatagaacggctgg  
gttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgt  
agagccacatccagcctggcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgt  
accaccctctggggaaaaactgcctctcatatccaacccaaacccctgtctcagtgttgcattgttgcattgttgcattgt  
atcaagggggagttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgttgcattgt

ggggataaggtcaggacagcatggacgtggacatgcagggtttagggctctggacactctccaagtacag  
cggtcagaacagcctaaggataagaagataggatagaaggacaagttaaaaccagcatggagaggag  
cacaaaaaggccacagacactgctggtccctgtctgagcctgcatgttgatgggtctggatgcaagcagaagggtc  
catgtccctcagtgccacatccccacagttctcatcacccagggacggtacccccccacccgtggcagctgtgc  
cactgcagcaccgccttggagaaggtaaatctgctaaatccagcccaccctccctggcacaacgtaaggcattat  
ctctcatccaactccaggaacggagtcagttag

7. (Original) The expression vector of Claim 4, which is a pUP2/hEPO (WPRE) vector containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and a woodchuck hepatitis virus posttranscriptional regulatory element (WPRE) of SEQ ID NO: 7 at the 3' end of the EPO gene:

[SEQ ID NO: 7]

accagggtctgtcctgttaatcaacctctggattacaaaatttgtaaagattgactggattcttaactatgtgctc  
ctttacgctatgtggatacgctgttaatgccttgatcatgtcttgcattgtctccgtatggcttcatttctccctgtataaaatcc  
tgggtgtctttatgaggagttgtggcccggttcaggcaacgtggcgtgtgcactgtttgctgacgcaacccca  
ctgggtgggcattgccaccacacgtcagtcctccggacttcgcctccctccattgccacggcggactcatcg  
ccgcctgcctgcccgtctggacagggctggcttggcactgacaattccgtgtgtcgggaagctgacgtc  
cttccatggctgctgcctgtgtgcacactggattctgcgcggacgtccctcgctacgtccctcgccctcaatccagcg  
gacccctcccgccgtctggcctctccgcgtctccgcgtctccgcctcagacgagtcggatccctt  
ggccgcctcccgccgttgcctcggctccgt

8. (Original) The expression vector of Claim 4, which is an I/pUP2/hEPO (WPRE) vector that contains a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, an insulator of SEQ ID NO: 6 at the 5' end of the UP2 promoter, and an WPRE of SEQ ID NO: 7 at the 3'-end of the EPO gene.

9. (Currently Amended) An animal's fertilized ovum introduced with the expression vector of ~~any one of Claims 4 to 8~~ Claim 4.

10. (Original) A transgenic animal obtained by the implantation of the fertilized ovum of Claim 9.

11. (Original) The transgenic animal of Claim 10, which is one selected from the group consisting of porcine, mouse, bovine, poultry, ovine and caprine animals.

12. (Currently Amended) A method for producing useful proteins, which comprises the steps of:

implanting the animal's fertilized ovum introduced with the expression vector of ~~any one of Claims 4 to 8~~ Claim 4 into a surrogate mother animal; and

obtaining transgenic animals from the surrogate mother animal; and  
isolating and purifying useful proteins from the urine of the transgenic animals.